

07/12/2017 19:30 UTC

The following graphs represent the second coordinated launch for Langley Research Center (LaRC; 37.1024, -76.3929) and the Chesapeake Bay Bridge Tunnel 3rd Island (CBBT; 37.0366, -76.0767) on 07/12/2017 at approximately 19:30 UTC with initial wind blowing approximately from the southeast at CBBT and from the south at LaRC. Preliminary analysis suggests a probable boundary layer around 1300 m at LaRC and a possible boundary layer capped at 200 m at CBBT. Potential temperature was in close agreement between CBBT and LaRC from 1000 m to 5000 m with nominal differences of about magnitude 1 K. LaRC had a uniform profile from about 200 m to 1300 m, whereas CBBT had a sharp decrease in the first 100 m and then an increasing theta profile until about 1200 m.

Preliminary observations suggest similar ozone mixing ratio profiles above CBBT and LaRC with slight variations. Ozone mixing ratio above CBBT and LaRC appears to have fluctuated between 55 ppbv to 70 ppbv in the first 2800 m. LaRC appears to have a higher ozone mixing ratio compared to CBBT from 2800 m to 3500. The remaining 3500 m to 5000 m showed similar profiles with the exception of the CBBT profile appearing to be shifted 100 m higher than LaRC, causing slight variations in the value of the ozone mixing ratio at most altitudes in this section.

PLEASE NOTE: This data is preliminary and should not be used for official business until certified by NASA technical staff.

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Sonde Data: 07/12/2017 19:46 UTC (LaRC) and 19:30 UTC (CBBT)

